APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,148	05/03/2006	Minerva Yeung	42P21742	8839

7590   12/15/2008
8791
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EXAMINER
OPSASNICK, MICHAEL N

ART UNIT	PAPER NUMBER
2626	

MAIL DATE	DELIVERY MODE
12/15/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 February 2008</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-23</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-23</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>03 May 2006</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or
> any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
> requirements of this title.

2.   Claims 1,4-8,16-23 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

Claims 1,4-8,16-23 are directed to calculating a match between speech information and

text information, which does not fall into one of the enumerated four categories of patent eligible

subject matter recited in 35 U.S.C. 101 (process, machine, manufacture, or composition of

matter).

Claims 1,4-8,16-23 are not directed toward:

1) a process (nothing is processed/transformed, although the claims perform a

comparison and mapping, the underlying data is not transformed); a statutory "process"

under 35 USC 101 must (a) be tied to another statutory category (such as a manufacture

or a machine), or (b) transform underlying subject matter (such as an article or material)

to a different state or thing. Claims 1,4-8,16-23 neither transform underlying subject

matter nor positively recite structure associated with another statutory category, and

therefore do not define a statutory process.);

2) a machine - Although claims 16-23 recite machine type elements, these elements as claimed, when treated as a whole, are more toward a non-statutory embodiment computer instruction embodiment and not necessarily a hardware embodiment.

3) a manufacture (no claim elements pertain to an output product nor a

4) a composition of matter (claims are toward a matching calculation, and not a composition of matter).

Furthermore, claims 1,4-8 are directed to a method which performs a matching calculation and as such, the claims do not produce a useful, tangible, and concrete result. If the acts of a claimed process manipulate only numbers, abstract concepts or ideas, or signals representing any of the foregoing, the acts are not being applied to appropriate subject matter (Benson, 409 U.S. at 71-72, 175, USPQ at 676). Furthermore, claims define nonstatutory processes if they simply manipulate abstract ideas (Warmerdam, 33 F.3d at 1360,31 USPQ2d at 1759). As for guidance to areas of statutory subject matter, see 35 U.S.C. 101 Interim Guidelines (with emphasis of the Clarification of Interim Guidelines For Examination of Patent Applications for Subject Matter Eligibility); as an example, in Alappat, the claimed output smooth waveform (consisted of lighting pixels on an oscilloscope/display) is a useful, concrete, tangible, final result; in Arrhythmia, the claimed useful, concrete, tangible, final result represented the condition of a patient's heart; in State Street, the claimed useful, concrete, tangible, final result was data output that represented a final share price momentarily fixed for

recording and reporting purposes and even accepted and relied upon by regulatory authorities

and in subsequent trades.

Claims 16-23 are also non-statutory under the most recent interpretation of the Interim

Guidelines regarding 35 U.S.C.101 because although this claim is toward a computer readable

medium, as claimed, does not define any structural and functional interrelationship between the

computer program and other claimed elements of a computer which permit the computer

program's functionality to be realized (Warmerdam, 33 F.3d at 1361,31 USPQ2d at 1760;

Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035). Examiner notes that as per claims 16-23,

elements such as machine readable medium and processor are necessary structures, the

interrelationships between the computer readable medium, the device, and the instructions are

not positively claimed (examiner notes that as an example, claim 14 recites the necessary

interconnectivity steps to make that particular claim statutory under 35 U.S.C. 101).

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
> sale in this country, more than one year prior to the date of application for patent in the United States.

4.   Claims 1-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Heckerman et al

(6260011).

As per claim 1, <u>Heckerman et al (6260011)</u> teaches a text-speech mapping method
(abstract) comprising:

obtaining silence segments for incoming speech data (as obtaining silence segments for
speech data – abstract, col. 11 lines 25-47); preprocessing incoming transcript data, wherein the
transcript data comprises a written document of the speech data (as processing input text files –
fig. 6, subblock 10 to 604); finding possible candidate sentence endpoints based on the silence
segments (as recognizing endpoints and time stamps - Fig. 6, subblock 406); selecting a best
match sentence endpoint based on a forced alignment score (as globally aligning the text – Fig.
6, subblock 607); setting a next sentence to begin immediately after the sentence endpoint (as
marking end of sentence using the silence information – col. 11 lines 25-37); and repeating the
finding, selecting and setting processes until all sentences for the incoming speech data are
mapped (and repeating until sound and text are synchronized and aligned – fig. 6, subblock
610,612, and fig. 11).

As per claim 2, <u>Heckerman et al (6260011)</u> The method of claim 1, wherein the
preprocessing incoming transcript data comprises:

scanning the transcript data; separating the scanned transcript data into sentences; and
placing each word from the scanned transcript data into a dictionary, if the word is not already in
the dictionary (as scanning text into text files and stored in the text corpus -- Fig. 6, subblock 10
and 604)

As per claim 3, <u>Heckerman et al (6260011)</u> teaches the method of claim 2, wherein each word in the dictionary includes information on the pronunciation and phoneme of the word (as containing phone information – col. 9 lines 34-46, as well as pronunciation information - col. 9 lines 55-65 and context -- col. 10 lines 21-26).

As per claim 4, <u>Heckerman et al (6260011)</u> teaches the method of claim 1, wherein the finding possible candidate sentence endpoints based on the silence segments comprises: using a dictionary as a table to map words and tri-phonemes for the transcript data (as stored acoustic data in the form of subphonemes - col. 9 lines 35-55, wherein triphone are well known in the art); generating an acoustic model for the speech data, wherein the acoustic model records acoustic features of each tri-phoneme for words in the speech data (as triphoneme – col. 9 lines 45-55, and col. 10 lines 44-48); and determining the similarity of the transcript data features obtained from the dictionary with the acoustic model features using a voice engine to find the possible candidate sentence endpoints (as using time stamps to mark endpoints – col. 10 lines 55-62 and col. 11 lines 25-37).

As per claim 5, <u>Heckerman et al (6260011)</u> teaches the method of claim 4, wherein the voice engine is a HMM (Hidden Markov Model) voice engine (as HMM being one of the probability calculations disclosed – col. 9 lines 23-33 -- HMM is a well known voice engine recognition model).

As per claim 6, <u>Heckerman et al (6260011)</u> teaches the method of claim 1, wherein upon completion of mapping each sentence, the method further comprises: obtaining silence segments for each mapped sentence, the method further including determining word level mapping for each mapped sentence, wherein the word level mapping comprises finding possible candidate word endpoints based on the silence segments; selecting a best match word endpoint based on a forced alignment score; setting a next word to begin immediately after, the word endpoint; and repeating the finding, selecting and setting processes until all words for the for the mapped sentence are mapped (as continual mapping of words including time stamps to recognize end of word, as well as end of sentence, col. 10 line 47 – col. 11 line 37; col. 11 lines 50-65, col. 12 lines 53-65).

As per claim 7, <u>Heckerman et al (6260011)</u> teaches the method of claim 1, wherein voice activity detection is used to obtain silence segments for incoming speech data (as detecting silence – col. 4 lines 13-15).

As per claim 8, <u>Heckerman et al (6260011)</u> teaches the method of claim 1, wherein a forced alignment process is used to find possible candidate sentence endpoints based on the silence segments, wherein the forced alignment process further includes selecting the best match sentence endpoint based on the forced alignment score (as when using alignment, choosing the best score – col. 4 lines 50-65, col. 8 lines 25-45)..

Claims 9-23 are system, tool, apparatus, and article claims that perform method steps that are similar in scope and content of claims 1-8 and therefore, are rejected under similar rationale as presented above against method claim 1-8. Furthermore, as per claims 9-10, Heckerman et al (6260011) teaches a front end receiver – fig. 6, subblock 20, fig. 3, subblock 312,316 as well as a voice engine – fig. 3, subblock 312). As per claims 11-13, Heckerman et al (6260011) also teaches a front end receiver –Fig. 3, subblock 3120, text preprocessor (Fig. 3, subblock 302), voice activity (speech recognizer – fig. 3 subblock 312 in conjunction with silence recognition col. 4 lines 13-20), and a forced alignment mechanism (Fig. 3, subblock 318). As per claims 14-23, Heckerman et al (6260011) teaches text-speech mapping (Fig. 3, subblock 318) and machine readable medium (Fig. 2, subblocks 122, 127,131)

Conclusion

5.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please see related art listed on the PTO-892 form.

6.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (571)272-7623, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Richemond Dorvil, can be reached at (571)272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Michael N. Opsasnick/
Primary Examiner, Art Unit 2626
12/7/08